

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method for manufacturing ceramic hollow fibers from nanoscale powders, the method comprising:

manufacturing a ceramic mass by transforming a nanoscale metal oxide, carbide, nitride or sulfide powder with an oxycarboxylic acid, compounded to the ceramic mass with at least one solvent and at least one polymeric binder, the metal axial, carbide, nitride, or sulfide powder having a particle size of between 1 and 300 nm;

extruding or spinning the ceramic mass to hollow fiber blanks; and
sintering the blanks.

2. (Previously Presented) The method according to claim 1 wherein the ceramic mass has a solids content of at least 20 vol%.

3. (Previously Presented) The method according to claim 1 wherein the nanoscale powder is aluminum oxide, zirconium oxide, yttrium stabilized zirconium oxide, titanium oxide, silicon carbide, tungsten carbide and/or silicon nitride.

4. (Currently Amended) The method according to claim 1 wherein the oxycarboxylic acid is ~~preferably selected from a group consisting of trioxadecanoic acid or and dioctaheptanoic acid.~~

5. (Currently Amended) The method according to claim 1 wherein the solvent is selected from a group consisting of water/// and or ethyleneglycol, propyleneglycol, diethyleneglycolmonoethylether, diethyleneglycolmonobutylether, especially and a mixture of ethyleneglycol and diethyleneglycolmonobutylether.

6. (Previously Presented) The method according to claim 1 wherein as polymer binder, a cellulose, methylcellulose, ethylcellulose, polyvinylalcohol, ambergum, a polyacrylate and/or polymethacrylate is utilized.

7. (Previously Presented) The method according to claim 1 wherein as polymeric binder a at least an acrylate and/or methacrylate is utilized, which is polymerized after the shaping by using a radical starter.

8. (Previously Presented) The method according to claim 1 wherein an external diameter of the ceramic hollow fibers is $< 500 \mu\text{m}$.

9. (Currently Amended) The method according to claim 1 wherein ~~a—extrusion mass~~before extruding the ceramic mass is placed in a special container or in a pressure vessel of a spinning device and conveyed through the spinning device between room temperature and 300°C .

10. (Previously Presented) The method according to claim 1 wherein the hollow fibers are sintered to densities of $> 97\%$ of the theoretical density.

11. (Currently Amended) The method according to claim 1 wherein porous hollow fibers are manufactured having a pore size, dependent on the sintering conditions (temperature, pressure, time, atmosphere) ~~and, of~~between 0.5 nm and 1000 nm .

12. (Previously Presented) The method according to claim 11 further comprising adding porous hollow fibers active carbon to the ceramic mass in an amount from 5 to 20 wt% as a template.

13. (Previously Presented) A method for manufacturing ceramic hollow fibers from nanoscale powders the fibers having an external diameter of $< 500 \mu\text{m}$ and contain a reaction product from a nanoscale metal oxide, carbide, nitride or sulfide powder, with an oxycarboxylic acid and at least one polymeric binder, the method comprising:

manufacturing a ceramic mass by transforming the nanoscale metal oxide carbide, nitride or sulfide powder, with the oxycarboxylic acid, compounded to the ceramic mass with at least one solvent and at least one polymeric binder;

extruding or spinning the ceramic mass to hollow fiber blanks; and
sintering the blanks.

14. (Withdrawn) The method according to claim 1 further comprising using the ceramic mass for forming ceramic structures by ceramic silk screening.

15. (Currently Amended) The method according to claim 1 further comprising using forming the ceramic hollow fibers for the manufacture of into a web that retains shape when sintered shape before sintering, said web retaining shape after sintering.

16. (Currently Amended) The method according to claim 1 further comprising using forming the ceramic hollow fibers for metal, polymer and ceramic into one of a group consisting of matrix reinforcements//; for artificial organs, for components in microsystems for optical waveguides, for ceramic membranes//; for the solid electrolyte in fuel cells (SOFC), for or tissue engineering and for the manufacture of extremely light weight ceramic parts for temperature stressed components like such as heat shields and brake systems, before sintering.

17. (Withdrawn) The method according to claim 1 further comprising using the ceramic hollow fibers for the manufacture of solid electrolytes in the high temperature fuel cell (SOFC).

18. (Withdrawn) The method according to claim 14 further comprising using the structures formed by ceramic silk screening for insulation coatings, functional coatings, protective coatings for sensors, actuators and displays.